

Northern Counties Association
for the Blind



The Prevention of
Blindness.

AN ADDRESS

delivered at the Quarterly Meeting of the
Northern Counties Association for the
Blind, held at Blackpool, November 14,
1928, by

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At the Meeting of the Northern Counties Association held at Blackpool on November 14th, 1928, it was unanimously resolved :—" That the Paper read by Dr. Foggin be printed and circulated and that the cordial thanks of the meeting be given to Dr. Foggin for his kindness in reading the Paper and for his permission to print it."

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MRS. BROOKS, *Secretary*,
NORTHERN COUNTIES ASSOCIATION FOR THE BLIND,
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The Prevention of Blindness.

In May, 1908, a little more than 20 years ago, I was privileged to address the North of England Union of Institutions, Societies, and Agencies for the Blind, the fore-runner of your present Organisation, on the subject of the "Prevention of Early Blindness." I was induced to do this at the instance of our esteemed colleague, Mr. William Robertson, because some seven years previously I had been appointed Honorary Ophthalmic Surgeon to the School he has directed and developed with such outstanding success—The Royal Victoria School for the Blind at Newcastle-upon-Tyne.

Up till that time the Institution had never had the assistance of a specialist in the oversight of the pupils and for the 70 years it had then been in existence no exact records or analysis of the eye conditions of the inmates had been kept. After carefully noting year after year the causation of Blindness affecting the pupils, one was amazed to find that the outstanding cause of their affliction was ophthalmia at birth, an entirely preventible disease, this being responsible year after year for 36 or even 39 % of all the blind cases. In the course of my Paper I pleaded strongly for the compulsory notification of all cases of inflammation of the eyes occurring in babies during the first 21 days of their life, and the meeting practically unanimously supported the proposal which was then beginning to secure the approval of prominent politicians. I remember the only objector was the late Dr. Nimmo Walker, of Liverpool, who opposed it, he said, because he considered "compulsory notification to be an unworkable idea." We owe Nimmo Walker our gratitude, however,

for he was an earnest worker in the cause of the Blind, and did much to organise treatment for this disease in Liverpool. I also remember with what indignant grief and horror we learnt of his death in the very early months of the War, when, whilst rendering medical aid to a wounded soldier in a barn, he was, in spite of his red cross brassard, bayoneted by a German,—one of the many martyr heroes of the Great War.

Twenty years is a long stretch of our lives and I may be pardoned if I linger a moment to count our gains in that period.

That year, 1908, saw the effective introduction of the Education (Administrative Provisions) Act which had been passed the previous year enabling Education Authorities to care for the health of school children ;—an Act of only a few lines but which, under the extraordinarily able administration of Sir George Newman, has been developed with marvellous ingenuity and determination, till now from such small beginnings it has become one of the most potent factors in the national welfare.

In 1927 no less than 1,823,775 children were examined on first entering school at five, at between eight and nine years, and at twelve to fourteen, before leaving : while more than two and a half million special inspections or re-inspections were made. What specially concerns us is that 315 out of 317 Authorities have schemes for the treatment of sight defects and 205,650 cases or re-examination of old cases were treated or had glasses prescribed, and about ten thousand other eye defects were dealt with. This, whilst far short of actual requirements, probably covered the worst cases of eye defect.

In 1908, Mr. Bishop Harman, whose work on behalf of the Blind we cannot too highly praise, began the first so-called Myope classes, for partially blind children, in London. From the latest returns there are now 35 such schools in England, accommodating about 1,600 children very sadly behind the actual requirements. I had the pleasure of reading to your Society a Paper on "Border Cases and Myope Classes" some twelve years or so ago.

In 1914, the notification of inflammation of the eyes of new born babies was made compulsory and in spite of the opinion of poor Nimmo Walker has proved not only administratively possible, but efficacious.

In the Seventh Report of the Advisory Committee on the Welfare of the Blind (1926-7) we find the following gratifying remarks: "In the age groups up to 21 there were in 1925 a total of 4,659, while in 1927 there were 4,482, a decrease of 177. This decrease is encouraging as it seems definitely to indicate that the measures in operation for the prevention of infantile blindness are restricting the number of persons who become blind in the early years of life."

In 1917 was published the Report of the Departmental Committee on the Welfare of the Blind which paved the way for the enactment in 1920 of what we may truly term the Magna Charta of the Blind—"The Blind Persons' Act" which has done so much, especially in its later developments, to bring education and training to the adult blind, to stabilise the earnings of the blind worker, and to afford a modicum of help and comfort to the unemployable and aged Blind, by means of pensions. I should also note the development of a more widespread interest on the part of the public in the welfare of the blind and the foundation of the National Society for the Welfare of the Blind and the care of the war-blinded soldiers.

I think we can look back on these twenty years with great satisfaction, feeling that though progress has been slow it has been sure. The organisation of all the local Blind Persons Committees under the administrative provisions of the Act of 1920, has definitely placed the care of the Blind on a solid foundation upon which the future may securely build and develop.

I am afraid that in the last few years so much of our attention has been directed to the work of organising the Committees to administer the Blind Persons' Act in the interests of the actually blind, that the question of the Prevention of Blindness has hardly yet received the full amount of attention it demands and deserves. As the Act itself is specifically designated as an Act to promote the Welfare of Blind Persons, it is perhaps understandable that the word *Prevention* is never mentioned in it, and in the various schemes of Authorities approved by the Ministry of Health, only here and there do we find any provision being made on preventive lines.

But we shall all agree, I think, that *Prevention is better than cure*, and that prevention all along the line of work for social welfare is the only sound, scientific and economic policy. In October, 1921, the Ministry appointed a Departmental Committee to enquire into the Causes and Prevention of Blindness and its Report was published in the following year, focussing the views of medical and other experts and formulating several important and valuable recommendations.

Now I do not desire to take up too much of your time with a detailed account of this, as I know many of you are more capable from your special knowledge of developing

the subject of Prevention better than I am, and I will, therefore, merely suggest a few leading points for discussion :—

Firstly, it will be agreed that the Prevention of Blindness ought to be the special duty (*inter alia*) of the Committees responsible for the administration of the Blind Persons' Act, rather than that of the Sanitary Authority as such.

Now in the Public Health Act, 1925, the following Clause appears :—No. 66.

PUBLIC HEALTH ACT, 1925.

66. (1) Without prejudice and in addition to any other power under any other Act, a County Council or Local Authority shall have power, with the consent of the Minister of Health, to make such arrangements as they may think desirable for assisting in the *prevention of blindness*, and in particular for the treatment of persons ordinarily resident within their area suffering from any disease of or injury to the eyes

This Clause should be incorporated in every local scheme and the power delegated to the Blind Persons' Act Committee.

Again, Clause 67, if also utilised would be of the greatest value in enabling Committees to carry out preventive work by propaganda of various forms :—

67. (1) Any Local Authority or County Council may arrange for the publication within their area of information on questions relating to health or disease,

and for the delivery of lectures and the display of pictures in which such questions are dealt with, and may defray the whole or a portion of the expenses incurred for any of the purposes of this section . . .

I would suggest that every Blind Persons' Act Committee should consider and adopt a scheme for its procedure and action in the matter of prevention. In what direction can its energy most profitably be employed? The causes of Blindness from the point of view of preventability may roughly be stated as follows:—

1. Ophthalmia at Birth—20 to 30 per cent.
2. Conditions associated with fevers—measles, malnutrition, and lowered vitality—(Phlyctenular keratitis and consequent corneal opacities).
3. Myopia.
4. Specific Disease, hereditary and acquired venereal disease.
5. Accidents—industrial conditions.
6. Congenital conditions—Albinism (pink eyes—white hair), cataract, congenital malformations.

1. Ophthalmia at birth still looms large on our list of the causes of blindness, and although there is evidence of a small progressive reduction, this is still not as rapid or as great as it might or should be. At the present time we have thirty cases in the Royal Victoria School for the Blind at Newcastle-upon-Tyne. Maternity services have been greatly improved and extended in recent years, and the midwives' profession is becoming better trained and more efficient. The extension of maternity hospitals and homes is growing and the public is being educated to appreciate the increased safety they offer to both mother and child.

There is still much room for prompt action in the case of infantile ophthalmia—a delay of a few hours in securing proper treatment means a seriously increasing risk of blindness. Steps should be taken to see that *specialist* advice is available at the very outset. The larger towns could be divided into districts and an ophthalmic surgeon be at call in emergency for each area. Arrangements should be made for the reception of mother and baby into hospital for efficient treatment, or if this is not possible, then a specially trained nurse should be allocated to the home of the baby to carry out the regular continuous treatment required.

I always feel intensely sad when I am inspecting our blind pupils to think that as every third or fourth case comes before me I am saying to myself—"This ought never to have been," and I recall the eloquent words of Dr. J. C. McVail in his Presidential Address before the Royal Society of the Medical Section of Epidemiology and State Medicine, 23rd October, 1924 :—

"If ever it were to fall to my lot to preach a sermon, my Text would be the saying of Christ, that 'It would be better for a man to have a millstone hanged about his neck and cast into the sea than that he should offend one of these little ones.' The offence may be physical or mental or moral, and the offender may be Parent or Nurse or Doctor or Schoolmaster or Public Authority or Politician."

Let us return home determined to see to it that all that can be done is done to lessen the incidence of such preventable calamities.

2. It is well known that fevers, especially measles, and debilitating diseases, are liable to be followed by serious eye trouble. The convalescent period following fevers

is a dangerous time and I think the period of exclusion from school and eye work is too short. It is not at all right to settle this solely on the grounds of whether infection is likely to be carried into school to other children. Rather should it be settled by the physical condition of the recovering child. Eye strain to an enervated child is, I am sure, often productive of Myopia.

The Phlyctenular conditions which so often attack debilitated and pre-tuberculous children are most amenable to proper treatment by such means as the Open-Air School, cod liver oil, vitamin dietary, and ultra-violet light. Of the last, still in its experimental stage, much is hoped in the way of direct eyeball application as well as by the diffuse body exposures.

3. It is possible to deal with quite a large number of these cases as well as those of Myopia in Sight Saving or Myope Classes, where sunlight, fresh air, abundant food, tonics, and other necessary treatment can be provided along with an almost entirely oral education. In Newcastle, as part of our Open-Air School, we have Myope Classes for forty children at present, which it is intended to double very shortly, and it is astonishing how rapidly the cases of phlyctenular keratitis and debility diseases clear up through being associated with the open-air school methods. In all probability, there are no less than 7,000 children who are partially blind, whilst the present educational accommodation in Myope Classes is only about 1,600. Further provision of these classes for the partially blind is very necessary to prevent such cases ending in industrial blindness, and is particularly needed under the administration of the Blind Persons' Act with its special standards of sighted industrial capacity.

I may be pardoned if I digress for a moment to refer as a matter of interest to the difficulties that have occurred through the wide difference between Educational and Industrial Blindness, but it is a matter of satisfaction that the Ministry saw its way to issue Circular 780 in elucidation of the previous one. No. 681. The original Circular 681 was sent by the Ministry after its issue to the Association of Education Authorities and was by them referred to a small Committee—Dr. Auden, of Birmingham ; Dr. Ritchie, of Manchester ; Dr. Chetwood, of Sheffield, and myself, and our Report and a second Report was forwarded by the Association to the Ministry. Circular 780 was the result in which the rather too rigid attitude of the earlier Circular was modified. It may be of interest, however, to mention that the recommendations we submitted in our Report were as follows, and these the Ministry stated would be referred to the Board of Education for consideration :—

(a) That the Board of Education should issue a model schedule for admission to a Blind Institution, bearing upon the degree of blindness, cause, prognosis, etc., giving sufficient evidence to justify certification.

(b) There should be further provision of accommodation for the partially blind throughout the country. Pressure should be brought to bear upon those Local Education Authorities which have not made such provision, to carry out their statutory duty in this matter. Institutions should be urged to define their function, and, if large enough, might be encouraged to establish parallel classes for the blind, and for those partially blind children whose homes are in scattered country districts, where it is not possible to provide education by sighted methods.

(c) Under Section 56, Sub-section (5) of the Education Act, 1921, children under the Blind and Deaf Children Act must be examined from time to time. In order to determine the nature of technical training, suitable for the individual, a determining examination should be made at the age of twelve, and in no case later than the age of fourteen years. The suggestion in the Circular that this determining examination should be carried out during the last year of school life, *i.e.*, in the sixteenth year, is too late, in our opinion, "to ensure that the provision made for his training or other form of after-care shall be appropriate to his needs."

(d) Some form of provision of technical training should be provided for these children who at the age of sixteen are not eligible for continued technical training under the Blind Persons' Act.

(e) The definition of Blindness acceptable to the Ministry of Health should not be based upon a hard and fast formula which excluded from its purview the degree of fitness for technical training.

That the Ministry of Health be urged to re-issue Circular 681 and to include therein the whole relevant portion of the recommendation of the Royal Society of Medicine as originally presented.

I would particularly commend to your careful consideration the question of the age at which pupils should be definitely judged for special sighted training—12 to 13 as we suggested, or 16 as suggested by the Ministry; if the latter age it would of necessity mean an extension of the age period for educational blindness.

With regard to the further provision of Myope classes and schools, every Committee under the Blind Persons' Act can influence the Local Education Authority to accelerate this desirable provision.

4. With regard to the cases of blindness due to inherited or acquired venereal disease we can again satisfy ourselves that the Local Health Authority is doing all that can be done for the provision of special and adequate treatment at the earliest moment. The Maternity and Child Welfare Organisations as well as the School Clinics are invaluable in their opportunity of early detection.

Of course, there are many forms of hereditary Blindness in addition to the special group I have noted. Congenital Cataract occurs in 50 % of the children born to parents who themselves have suffered from congenital cataract ; for instance, a boy blind from cataract had grandfather, father, and three aunts all suffering from the same condition. Retinitis pigmentosa also affects 50 % of the off-spring. Structural abnormalities—mainly developmental—such as dwarfed eyeballs (microphthalmos), Coloboma of the iris, displaced lenses, are all liable to be handed on. A semi-blind mother with microphthalmos had six children born with the same condition. All these conditions can only be combated by *propaganda* work and the education of the public in eugenics. Twenty per cent. of the blind are mentally defective, epileptic, or with serious nervous debility, and the number of deaf-blind is also very large. All these conditions are very liable to be transmitted.

It is the same with our efforts to control blindness due to accidents. Propaganda must take a very prominent place in the *preventive* side of the work of the Blind Persons' Act Committee. The teaching of Hygiene, especially in schools, and even in training colleges, is still far from

satisfactory. Popular lectures on Blindness and its avoidance, exhibitions of the Blind Workers' products, generally capturing the interest of the Public in the welfare of the blind, will lead to much good. In factories, ship-yards, and workshops the special training of the ambulance man in the right way to deal with apparently trivial eye wounds, abrasions, etc., would save, to my knowledge, enormous sums of money in compensation and loss of wage earning capacity. The use of protective glasses would save an immense number of eye injuries in many sections of engineering and shipbuilding industries, and will only be secured by the education of the workers to appreciate the value of protective measures.

I can only detain you a moment on the question of *Research Work*—the key to all scientific progress. Research work into the causes and prevention of blindness should be a national duty; it is expensive and absorbing, but we live in a so-called economic age that wastes the million and grudges the thousand pounds. The annual amount paid in compensation for cases of miners' Nystagmus, or Eye Shake, reaches £300,000. Could research work not enable us to reduce this? R. J. Coulter, M.B., B.Ch., F.R.C.S.I., Ophthalmic Surgeon, Royal Hospital, in a Paper read at the British Medical Association, 1928, on the "Light Sense in Miners' Nystagmus," suggests that some of the prolonged cases of miners' nystagmus may be suffering from vitamin deficiency. He concludes, "I cannot refrain from expressing my opinion that in spite of all the discussions which have taken place on Miners' Nystagmus, and all the money which has been spent on compensation and deciding whether individuals are entitled to it or not, the poor patient has been most shamefully neglected and very little attention has been paid to his general condition or to the measures which ought to be adopted to improve it."

Again, are we not familiar with the hundreds of cases of opacity of the cornea, where the other structures of the eyeball are more or less normal ? Only a new window pane required to flood the room with light ! Dr. Wolfe, of Glasgow, whom I knew many years ago, carried out experimental transplantation of the cornea of the rabbit and even corneal discs from freshly removed human eyes, in an endeavour to replace opaque tissue by transparent, but he failed. Is the problem insoluble ? Are we clear as to the causes of sympathetic sight destruction in the second eye after injuries ? How much do we know of the causation of Optic Atrophy ? I know of one family alone with five cases which cost an Education Authority, and this only till they became sixteen years old, over three thousand pounds. There are many lines on which research work could be encouraged, and in the interests of suffering humanity, as well as from economic motives, a national effort should be encouraged and no doubt could be by the influence of Committees administering the Blind Persons' Act.

May I then recapitulate for your discussion the following points :—

1. The inclusion of definite Prevention work as part of the scheme of every local Committee administering the Blind Persons' Act. This should include the more efficient control of Ophthalmia at birth by immediate *specialist* supervision, specially trained nursing care, and special hospital provision. The more efficient training of nurses and midwives and medical students in the recognition and treatment of the disease.

2. The fuller development of eye clinics and the provision of glasses or other treatment by Education

Authorities. The further provision of Myope Classes for the partially blind, with open air and other suitable treatment for the debility type of cases.

3. Propaganda and the education of the public and of the worker. The formation of Works Committees to protect the safety of the workers in various trades.

4. Research Work—I think you will agree that there is a wide opportunity here for manifold activities, the success of which would mean so much not only to the individual but to the race.

The magnitude of the problem of the care of the Blind is not realised by the general public.

According to the latest available statistics the Blind population of England and Wales amounts to the huge total of 46,822. Without hesitation we may confidently assert that at least 25 % of these have become Blind through preventable causes. In other words, more than 7,500 Blind people in this country should never have been Blind at all.

Apart from all the suffering and distress and putting it upon a merely economic basis, it may safely be asserted that these cases alone represent industrially a loss of more than a million pounds per annum.

In pensions alone to the aged blind the State is contributing £364,000 per year, whilst Local Authorities under the Blind Persons' Act incurred last year an expenditure of £173,828. In addition to this the training and education of blind children is costing a further very large sum of money, approximately £180,000 per annum.

It will be realised then that we have here a problem so serious, even from the economic point of view, as to demand the united efforts of all sections of the Community to co-operate in its solution successful.

Sir George Newman, in that statesmanlike book issued by the Ministry of Health, entitled "An Outline of the Practice of Preventive Medicine," concludes with the following stimulating words :—

"It has been said that we stand to-day at the door of opportunity, and that upon us of this generation has been imposed the duty of laying the foundations of a new epoch Knowledge, clearness of mind, the broad vision, strength of will and sympathy of heart have been in the past, and they will be in the future, the inspiration of all high human endeavour . . . The impairment of the physique of the human body is the impairment of the intellectual and moral fibre, for the body is the tabernacle of the spirit of man . . ."

With the development of knowledge and the advancement of organised civilization a wonderful power rests to-day in the hands of all public authorities, and a sacred trust to exercise it on behalf of the community in protecting and helping its poor and afflicted members. No nobler call can come to us than to spend our strength in the service of our neighbour—the clarion call of Christ—who himself restored sight to the blind, and we shall not have met here in vain if we return determined, in the fulfilment of our public duties, to do even a little more or a little better than we have done before.

